

# MISSOURI CONSERVATIONIST

VOLUME 86, ISSUE 1, JANUARY 2025  
SERVING NATURE & YOU



# NATURE

is

# healthy



Exposure to nature can **help you relax** and be kind to others.



Spending time in conservation areas, woods, backyards, and urban parks may **ease stress levels**.



Getting away from busy schedules allows people to **connect with nature and themselves** in a way that brings calm and a sense of well-being.



Being outdoors gives us energy, **makes us happier**, and helps us feel more focused.



Taking a nature walk may **increase creative problem-solving skills** by as much as 50 percent.

Get outside and enjoy nature today!  
Download the free **MO Outdoors** app  
for ideas on where to go near you.



# Contents

JANUARY 2025  
VOLUME 86, ISSUE 1



# 10

## FEATURES

### 10 Annual Review

Serving Nature and You:  
Fiscal Year 2024

## DEPARTMENTS

- 2 Inbox
- 3 Up Front
- 4 Nature Lab
- 5 In Brief
- 28 Get Outside
- 30 Places To Go
- 32 Wild Guide
- 33 Outdoor Calendar



# 30

## MISSOURI CONSERVATIONIST



### ON THE COVER

Snow covers Little  
Bonne Femme Creek.

### 📷 NOPPADOL PAOTHONG

17–40mm lens, f/22  
0.8 sec, ISO 50

### GOVERNOR

Michael L. Parson

### THE CONSERVATION COMMISSION

**CHAIR** Margaret F. Eckelkamp

**VICE CHAIR** Mark L. McHenry

**SECRETARY** Raymond T. Wagner Jr.

**MEMBER** Steven D. Harrison

### DIRECTOR

Jason A. Sumners

### DEPUTY DIRECTORS

Andrew Bond, Laura Conlee,  
Aaron Jeffries

### MAGAZINE STAFF

### MAGAZINE MANAGER

Stephanie Thurber

### EDITOR

Angie Daly Morfeld

### ASSOCIATE EDITOR

Larry Archer

### PHOTOGRAPHY EDITOR

Ben Nickelson

### STAFF WRITERS

Kristie Hilgedick, Joe Jerek,  
Dianne Van Dien

### DESIGNERS

Kate Morrow, Marci Porter

### PHOTOGRAPHERS

Noppadol Paothong, David Stonner

### CIRCULATION

Marcia Hale

[mdc.mo.gov/conmag](https://mdc.mo.gov/conmag)



Download this  
issue to your  
phone or tablet at  
[mdc.mo.gov/mocon](https://mdc.mo.gov/mocon).



# Inbox



## Letters to the Editor

Submissions reflect readers' opinions and may be edited for length and clarity. Email [Magazine@mdc.mo.gov](mailto:Magazine@mdc.mo.gov) or write to us:

MISSOURI  
CONSERVATIONIST  
PO BOX 180  
JEFFERSON CITY, MO 65102

## ART INSPIRED

My 13-year-old niece Sadie visited us for Thanksgiving from Georgia. Your magazine came in the mail while she was here. She loves to paint, and I wanted her to paint me a picture. This is what she did. We love MDC. Keep up the good work.

Brandon Crawford  
St. Mary

## BIRDS OF A FEATHER

I generally don't write letters about something I've read, but I wanted you to know I enjoyed *A Blizzard of Geese* [Page 20] and *Missouri's Woodpeckers* [Page 10] in your November issue.

I think I'm part of a large but quiet group who really enjoy your magazine. The work your staff puts into the stories and the fact that the Department of Conservation continues to make it free to its citizens is fantastic. Thank you for all of your work and the teaching done through your articles.

John Feely Saint Charles



Thank you for the excellent article on and pictures of Missouri woodpeckers. It was very informative. Your articles are always outstanding, and I enjoy reading your magazine. In fact, I prefer to read the *Missouri Conservationist* before reading anything else. I live in Michigan but was born and raised in Missouri. Keep up the great job.

Lawrence Denny Michigan

## MOUNTS

I very much enjoyed *Beyond the Traditional Mount* [November, Page 16]. I have displayed many of my own mounts using these techniques for years.

One additional suggestion is to dip in three-successive coats of a diluted solution of Elmer's Glue. It further protects the mount, providing a rock-hard finish and almost ivorylike appearance. Our Alaskan taxidermists use this process regularly. It serves to not only protect the process of ungulates but also bears.

I've been enjoying the *Missouri Conservationist* for as long as I can remember and I'm 78 now.

John Erkmann Anchorage, AK

## COMPLIMENTS TO THE PHOTOGRAPHERS

I'd like to compliment you on the December magazine. The photos are unbelievable! Every page I turned was more thrilling than the previous page. The photographers are truly talented. I feel like I'm right there in the picture with them.

I always look forward to seeing your magazine in my mailbox.

Kathy Gallagher via email

## Connect With Us!



/moconservation



@moconservation



@MDC\_online

## Conservation Headquarters

573-751-4115  
PO Box 180  
Jefferson City, MO  
65102-0180

## Regional Offices

Southeast/Cape Girardeau: 573-290-5730	Southwest/Springfield: 417-895-6880
Central/Columbia: 573-815-7900	Northwest/St. Joseph: 816-271-3100
Kansas City: 816-622-0900	St. Louis: 636-441-4554
Northeast/Kirkville: 660-785-2420	Ozark/West Plains: 417-256-7161



## Have a Question for a Commissioner?

Send a note using our online contact form at [mdc.mo.gov/commissioners](http://mdc.mo.gov/commissioners).

## MISSOURI CONSERVATION COMMISSIONERS



Margy  
Eckelkamp



Steven  
Harrison



Mark  
McHenry



Ray  
Wagner Jr.

The Missouri Department of Conservation protects and manages the fish, forest, and wildlife of the state. We facilitate and provide opportunity for all citizens to use, enjoy, and learn about these resources.



### Want to see your photos in the *Missouri Conservationist*?

Share your photos on Flickr at  
flickr.com/groups/mdcreaderphotos-2025  
or email Readerphoto@mdc.mo.gov.



1 | Bald eagle by  
Rob Barth, via  
Flickr

2 | Missouri River  
ice pancakes by  
Tony Dean, via  
Flickr

3 | American  
mink by Jack  
Backs, via Flickr



### Want another chance to see your photos in the magazine?

➔ In the December issue, we plan to feature even more great reader photos. Use the submission methods above to send us your best year-round pictures of native Missouri wildlife, flora, natural scenery, and friends and family engaged in outdoor activities. Please include where the photo was taken and what it depicts.



# Up Front

✕ **John Muir** — **naturalist, writer, and advocate for conservation** — once wrote, “Everybody needs beauty as well as bread, places to play in and pray in, where nature may heal and give strength to body and soul.” We often refer to these places as the farm, the cabin, the creek, or the lake. These are the special places we visit to recharge and connect with nature and the special people in our lives. Often, we want to share these special places with others.

This fall, long-time friends invited me to visit “the cabin,” which is in the Big Buffalo Creek Priority Geography. Over the last few years, they have been working closely with Benton County Private Lands Conservationist Dave Niebruegge to implement several habitat management actions focused on restoring the glades and woodlands characteristic of this area. As we toured the property, the sense of pride they have for taking care of nature and the resulting benefits to the fish and wildlife present on the property and nearby creek was inspiring. This is just one example of the thousands of landowners across Missouri caring for their special places to benefit the wildlife that depend on them.

This issue is dedicated to reflecting on the conservation work and collective accomplishments with numerous private landowners, partner organizations, and communities. These accomplishments work to conserve the landscapes in which our special places occur and the diversity of fish, forests, and wildlife that inhabit these places (See *Annual Review* on Page 10.)

**JASON SUMNERS, DIRECTOR**

JASON.SUMNERS@MDC.MO.GOV

The *Missouri Conservationist* (ISSN 0026-6515) is the official monthly publication of the Missouri Department of Conservation, 2901 West Truman Boulevard, Jefferson City, MO (Mailing address: PO Box 180, Jefferson City, MO 65102.) Equal opportunity to participate in and benefit from programs of the Missouri Department of Conservation is available to all individuals without regard to their race, color, religion, national origin, sex, ancestry, age, sexual orientation, veteran status, or disability. Questions should be directed to the Department of Conservation, PO Box 180, Jefferson City, MO 65102, 573-751-4115 (voice) or 800-735-2966 (TTY), or to Chief, Public Civil Rights, Office of Civil Rights, U.S. Department of the Interior, 1849 C Street, NW, Washington, D.C. 20240.

**SUBSCRIPTIONS:** Visit [mdc.mo.gov/conmag](http://mdc.mo.gov/conmag), email [subscriptions@mdc.mo.gov](mailto:subscriptions@mdc.mo.gov), or call 573-522-4115, ext. 3856. Free to adult Missouri residents (one per household); out of state \$13 per year; out of country \$19 per year. Notification of address change must include both old and new address (send mailing label) with 60-day notice. Preferred periodical postage paid at Jefferson City, Missouri, and at additional entry offices.

**POSTMASTER:** Send correspondence to Circulation, PO Box 180, Jefferson City, MO 65102-0180. Phone: 573-522-4115, ext. 3856. Copyright © 2024 by the Conservation Commission of the State of Missouri.

Printed with soy ink



# Nature LAB

MDC uses research to improve fish, forest, and wildlife management

## ECONOMIC IMPACT

### Nature's Monetary Ripples

Nature-related activities add to the economy

by Dianne Van Dien

✱ While the biggest reasons to value nature are not monetary, “all the activities that people do outdoors, the products they buy to use outdoors, contribute to Missouri’s economy,” says MDC Natural Resource Economist Tom Treiman.

Fishing poles, hiking boots, binoculars, rifles, boats, and other gear, along with outdoor-trip expenses like gas, food, and lodging, put money into local businesses and help support jobs. The 2022 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation (see below) estimated that Americans spent \$394.8 billion on wildlife-related recreation that year, and of that, \$8.9 billion was spent in Missouri.

Treiman used this survey data, along with data that MDC collects (information on forest products and hunting and fishing permits) and data from agencies like the Bureau of Labor Statistics, to estimate the total



When people go fishing, they purchase poles, lures, bait, and other gear, all of which adds money to the economy.

contribution that forestry, hunting, fishing, and other wildlife-related activities make to the state’s economy.

All this data was put into an “input-output model,” Treiman said. “The model estimates the total amount that people and companies spend directly on these activities. The model then estimates how much additional economic activity that spending creates.”

The results — revised to reflect 2023 costs — show that forestry and wildlife-related activities contribute about \$20.2 billion to the state’s economy and more than 136,000 jobs.\*

“This kind of information can help organizations — agencies like MDC — make better decisions,” Treiman explained.

MDC is entrusted with managing the state’s fish, forests, and wildlife, and with providing opportunities for people to connect with nature and engage in outdoor pursuits. Each year the department must decide which projects to carry out on behalf of Missourians. “Should we undertake a project here or a project there? Should we focus on forest resources in the south or chronic wasting disease all over the state? Dollar signs aren’t the only things that matter when we’re making decisions like these,” Treiman said, “but we would like to make the most efficient use.”

\*These figures do not include MDC employment or spending. See Page 11 for details about MDC’s annual budget.

## At a Glance

### National Survey of Fishing, Hunting, and Wildlife-Associated Recreation: 2022 Missouri Results

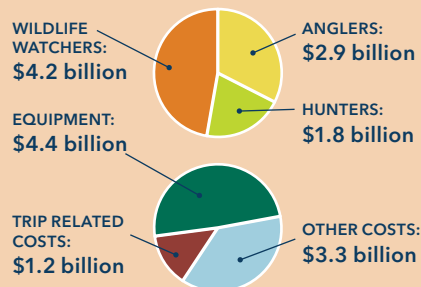
The U.S. Fish and Wildlife Service coordinates the survey, which asks a representative sample of people across the nation about their outdoor activities and their spending on outdoor activities. In addition to the standard questions, the survey asked Missourians state-specific questions. The survey is conducted on a five-year cycle, with 2022 being the most recent.



2.9 million

Missouri residents participated in wildlife-related activities in 2022.

\$8.9 billion was spent in Missouri on wildlife-associated recreation by Missouri residents and nonresidents.



# In Brief

News and updates from MDC



Two MDC staff make fish habitats from old Christmas trees at a park in California, MO.

## GIVE A GIFT TO NATURE

YOUR CHRISTMAS TREE CAN BE THE LAST GIFT YOU GIVE DURING THIS HOLIDAY SEASON

➔ MDC forestry staff remind you — don't throw that cut Christmas tree into the trash after the holidays. Recycle it! Many communities have a Christmas tree-recycling program. If not, there are several creative ways to make further use of your tree.

Place the tree in the backyard to offer cover for wildlife or under bird feeders to provide nesting locations in the branches. Add some post-holiday treats as ornaments by coating pinecones with peanut butter and adding birdseed.

Have your tree shredded or chipped for mulch, or place cut branches over dormant plants to provide a bit of insulation during the winter and to add organic matter as the needles fall.

You can also sink the tree in a pond to enhance fish habitat by giving them a place to rest, nest, and escape predators. Multiple live trees make the best cover, so work with friends, family, and neighbors to combine efforts. Anchor the trees with concrete blocks and sink them at a depth of about 8 feet with the trees placed in a row.

If you used a balled live evergreen and your ground is still soft enough to dig, add it to your home landscape for years of enjoyment and wildlife cover.



### APPLY ONLINE FOR MDC SPRING MANAGED TURKEY HUNTS

Missouri youth, archery, and firearms turkey hunters can apply online for 2025 spring turkey managed hunts starting Feb. 1 at [mdc.mo.gov/springturkeyhunts](https://mdc.mo.gov/springturkeyhunts). Managed hunt details and application procedures are outlined on the webpage. Drawing results will be posted starting March 15.

Spring turkey hunting youth weekend will be April 12-13 with the regular spring season running April 21 through May 11.

Detailed information on spring turkey hunting will be available in MDC's *2025 Spring Turkey Hunting Regulations and Information* booklet, available where permits are sold beginning in February. Learn more about turkey hunting in Missouri at [short.mdc.mo.gov/Ztu](https://short.mdc.mo.gov/Ztu).

### BUY YOUR 2025 HUNTING AND FISHING PERMITS

MDC reminds Missouri hunters and anglers that related annual permits expire at the end of February, including 2024 permits for small game, fishing, trout fishing, and combination hunting and fishing.

Buy Missouri hunting and fishing permits from one of the many vendors around the state or online at [mdc.mo.gov/buypermits](https://mdc.mo.gov/buypermits). Once purchased, permits may be carried electronically through MDC's free mobile apps, MO Hunting and MO Fishing, available for download through Google Play for Android devices or the App Store for Apple devices.

Save time by buying hunting and fishing permits for multiple people in a single transaction. Select the *Additional Customer* option during the permit purchase.

Commercial and lifetime permits can be purchased only through the MDC Permit Services Unit by calling 573-522-0107 for an application.

## Ask MDC

### Got a Question for Ask MDC?

Send it to [AskMDC@mdc.mo.gov](mailto:AskMDC@mdc.mo.gov)  
or call 573-522-4115, ext. 3848.

#### Q. Last winter, I saw a doe with four babies. How often does this happen?

➔ Although it's possible four fawns were birthed by one doe, it is somewhat unlikely. The University of Illinois did a multi-year research project and found that 0.3 percent of does, or 1 in 324, were pregnant with quadruplets. Female whitetails have been known to adopt and rear orphaned fawns while they are still dependent on milk. However, does typically only adopt other fawns if they lose their own offspring.

The most likely explanation is that one or more of the fawns was born to a different doe and was separated from her once they were nutritionally independent — for example, she was harvested during deer season or was hit by a car — and they joined the doe you saw and her fawns. Doe groups typically share some degree of genetic relatedness, but they also can be mixed with different maternal lineages.

#### Q. I came across this little guy in the dark one autumn morning on my way to my tree stand. Is it a centipede of some sort?

➔ This is a glowworm, which is a beetle larva in the Phengogidae family and, in this case, likely the *Phengodes*



Glowworm

genus. The females and larvae in this family have bioluminescent organs. The genus name is derived from the Greek words *phéngos*, which means "light, shining, splendor," and *ódes*, which means "like or resembling." This beetle family is distinctly different from fireflies (family Lampyridae), which also may be called "glowworms" in their larval stage. For more information, visit [short.mdc.mo.gov/4KX](https://short.mdc.mo.gov/4KX).

#### Q. I took this picture on my farm in January. Could you tell me what it is?

➔ This is a fruticose type of lichen. Lichens are plantlike, but they are not plants. A lichen is a composite organism formed by certain fungus species that join with certain algae species. The relationship between the fungus and the algae is quite intimate and integrated, and



Fruticose lichen

the lichen that is formed does not much resemble either of the components.

Fruticose, or shrubby, lichens are three-dimensional. They typically grow in multi-branched tufts, resembling tiny leafless shrubs. The branches are round or sometimes flattened in cross-section. The reproductive structures can be club-shaped with colored tips, like fruits, or like tiny goblets or horns.

The most obvious representatives of the shrubby lichens are the beard

lichens and tree lichens, which grow in branching, shrubby, gray-green tufts on tree branches. But a big group of shrubby lichens are the cladiform species, common on soil or rotting logs — reindeer moss, British soldiers, brown cap, and the various species of pixie cups, whose spore-bearing structures resemble goblets.

Roughly speaking, Missouri has about 55 species of fruticose lichens. For more information, visit [short.mdc.mo.gov/4K2](http://short.mdc.mo.gov/4K2).



## Donald Fessler

CHARITON COUNTY  
CONSERVATION AGENT

*offers this month's*

# AGENT ADVICE

People often look for new opportunities in the new year. How about waterfowl hunting? Waterfowl hunting is a great way to get outdoors and enjoy nature, no matter the weather. In January and February, you are bound to see hundreds of migratory species. In cold, frozen conditions, migratory species can be found feeding on agricultural fields. In warmer temperatures, they can be found on or near water sources. If you plan to start waterfowl hunting, you will need a shotgun, decoys, calls, camouflage, and waders. You will also need a small game permit, migratory bird permit, and electronic federal duck stamp. To find hunting opportunities at managed wetlands throughout the state, visit [short.mdc.mo.gov/Z9o](http://short.mdc.mo.gov/Z9o). Good luck and stay safe!

## What IS it?

Can you  
guess this  
month's  
natural  
wonder?

*The answer is on  
Page 8.*





# SPECIES OF CONSERVATION CONCERN

## Bluestripe Darter

by Chris Rice

The bluestripe darter (*Percina cymatotaenia*) is a slender, 3-inch fish found exclusively in medium-sized rivers of the south-central Ozarks. This species' generic name, *Percina*, loosely translates to "little perch." During breeding, males develop a series of temporary but intense blueish-black vertical bars along their sides. The bluestripe darter is also a Missouri endemic species, meaning it is only found in Missouri and nowhere else in the world.

### WHY IT'S IMPERILED

The species is strongly associated with aquatic vegetation and requires silt-free gravel stream beds for successful reproduction. It is suspected that habitat alteration, specifically sediment deposition from excessive soil erosion, may have deteriorated these essential habitat conditions throughout portions of the species' range.

### MDC RESTORATION EFFORTS

MDC is collaborating with the University of Missouri-Columbia on a study designed to reevaluate the species' distribution, its population status, and stressors related to its apparent decline. The study will also assess genetic variations within the species, which will help MDC identify unique populations and later develop management strategies adapted to those unique populations.

### WHAT CAN YOU DO?

Help reduce streambed sedimentation by maintaining vegetation corridors near streams. Minimize the extent of disturbed areas during construction projects occurring near streams and use appropriate mitigation practices, such as silt fences or sediment traps in areas where water flows during and after heavy rains. These practices will help stabilize soil by slowing water flow during erosive flood events. Preventing the spread and establishment of aquatic nuisance species that might displace bluestripe darters is also essential. For example, never release unused live bait or aquarium pets into any body of water.

## WHAT IS IT? SNOWY OWL

Snowy owls are large, white owls with rounded heads and yellow eyes. They are uncommon in Missouri, but numbers peak

about every four years. Most of the snowy owls that visit are immature individuals that may move south due to a lack of space after a successful breeding season. Birdwatchers travel to get a chance to see these feathered visitors, who remain active during the day.

## GEORGE SEEK RECEIVES MASTER CONSERVATIONIST AWARD

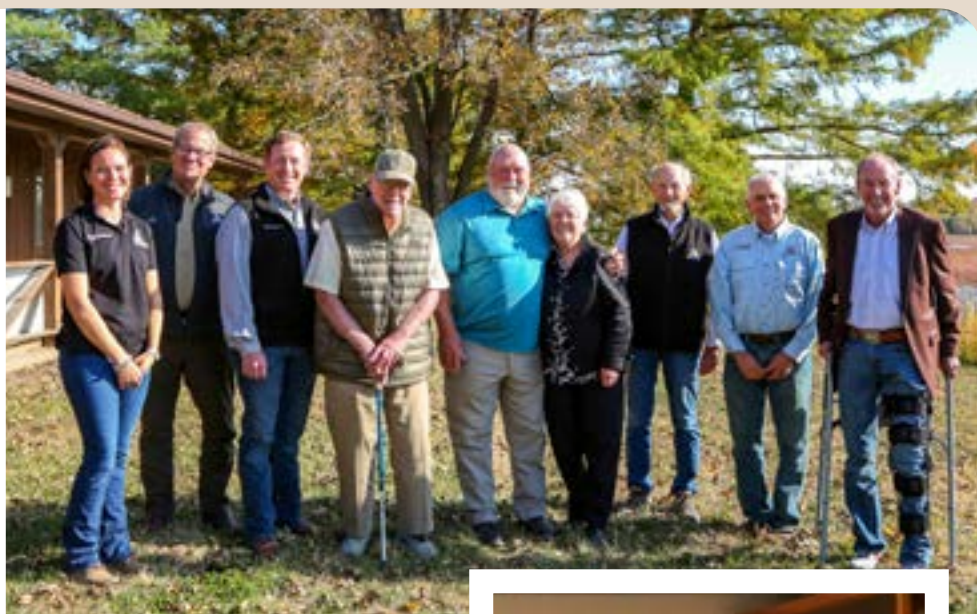
Retired MDC employee George Seek of Meadville received the Master Conservationist Award on Oct. 24 during a special ceremony at Fountain Grove Conservation Area (CA) in north-central Missouri. Seek worked for MDC for more than 30 years, retiring as chief of the Private Lands Division.

The Master Conservationist Award was created in 1941 to honor living or deceased citizen conservationists, former MDC commissioners, and employees of conservation-related agencies, universities, or organizations who made substantial and lasting contributions to the fisheries, forestry, or wildlife resources of the state.

"George Seek's contributions to Missouri's wildlife conservation efforts have been numerous, far-reaching, and lasting," said MDC Director Jason Summers during the ceremony. "His efforts spanned a career of more than 30 years, and continue today, even in retirement. At each step of his career, George demonstrated excellent leadership, planning, supervision, innovation, and team-building skills, both internally and with outside partners."

Conservation Commission Chair Margy Eckelkamp added that Seek has left his mark on conservation across Missouri, and beyond.

"The nomination of George Seek for our Master Conservationist Award was accompanied by many letters of endorsement, including three from former conservation commissioners," said Eckelkamp. "We thank George for his many decades of service to both conservation and our country, and wholeheartedly congratulate him on this well-deserved award."



Before joining MDC, Seek earned a bachelor's degree in agriculture with a major in fish and wildlife ecology from the University of Missouri-Columbia. He also received additional military training and education, including a master's degree in strategic planning from the U.S. Army War College.

Seek joined MDC in 1972 as a research assistant for deer and waterfowl biologists. He then served as a wildlife area assistant for Schell-Osage CA in southwest Missouri before becoming the area's assistant manager. In 1979, Seek was promoted to a wildlife area manager for Fountain Grove CA and helped manage portions of Swan Lake National Wildlife Refuge. His responsibilities grew to include managing Grand Pass, Franklin Island, Cooley Lake, and Bob Brown conservation areas and supervising 16 staff. He was then promoted to a wildlife district supervisor in 1983 with responsibilities for the 10-county Grand River District. During that time, he was instrumental in major wetland developments at Grand Pass and Fountain Grove conservation areas. Seek became a wildlife regional supervisor in 1997 for MDC's 19-county Northwest Region. He then became the division chief for MDC's newly formed Private Land Services Division in 1999 until his retirement in 2003.

During his time with MDC, Seek was also instrumental in developing the department's first Wetland Management Plan, providing important insights from an experienced manager's perspective on the challenges of wetland restoration and management. Seek also led MDC's initial effort and report on the *Evaluation of Waterfowl and Waterfowl Hunting on MDC Areas*, which provided an important basis for the evolution of public hunting to follow. He also wrote part of the department's book, *Waterfowl Hunting and Wetland Conservation in Missouri*, considered the most



contemporary historic overview of waterfowl and wetlands management ever published in Missouri.

After retirement, Seek focused on helping Ducks Unlimited establish the Confluence Focus Area near St. Louis for land protection to secure donated conservation easements on 25,000 acres of waterfowl habitat. Seek is also the founder and primary manager of Massasauga Flats, LLC, a private 250-acre wetland in north-central Missouri that provides diverse natural shallow wetland habitat where more than 160 different wetland birds have been documented and is a model for how to manage wetlands without dependence on crops.

He has also served as a member, vice-chair, and chair of the Wetlands and Waterfowl Resource Advisory Committee for the Conservation Federation of Missouri, the state's oldest grassroots conservation organization.

In addition to his extensive conservation work, Seek also retired as a colonel from the U.S. Army Reserves, following more than 30 years of service, from 1972-2003, in the Reserves and the Missouri National Guard.

To learn more about the Master Conservationist Award, visit [short.mdc.mo.gov/4KA](http://short.mdc.mo.gov/4KA).





**F**or the Missouri Department of Conservation, it's hard to discuss this past year without recognizing it was a year of leadership transition with the retirement of Director Sara Parker Pauley. As a native Missourian and dedicated conservation professional, it is incredibly humbling to have been asked by the Conservation Commission to serve as the 10th director in the 87-year history of MDC. While my appointment as director means different leadership for the agency, I remain committed to continuing to build on the agency's mission to conserve Missouri's fish, forest, and wildlife resources while providing opportunities for all Missourians to learn about and enjoy the exceptional outdoor resources that exist in this great state.

This *Annual Review* highlights the continued commitment to strengthen partnerships with local communities, conservation groups, and other stakeholders as MDC works to address emerging issues and highlight innovative conservation programs, from landscape restoration efforts to educational

initiatives and community engagement. The MDC team continues to work tirelessly to ensure that Missouri's fish, forest, and wildlife resources remain a cornerstone of the state's heritage. As we look back on 2024, we celebrate the collaborative efforts of our dedicated staff, passionate volunteers, and engaged citizens who play a vital role in advancing conservation. Together, we've made strides in addressing critical issues such as grassland conservation, reduction of invasive species like feral hogs and invasive care, expanded turkey hunting opportunities, improved wetland and aquatic habitats, and enhanced citizen engagement in the outdoors.

I look forward to this new year, continuing to work together to meet new opportunities and challenges together.

*Jason Sumners*

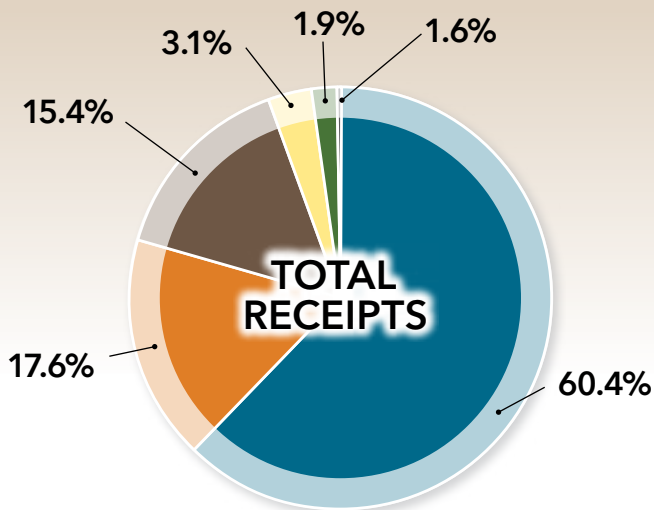
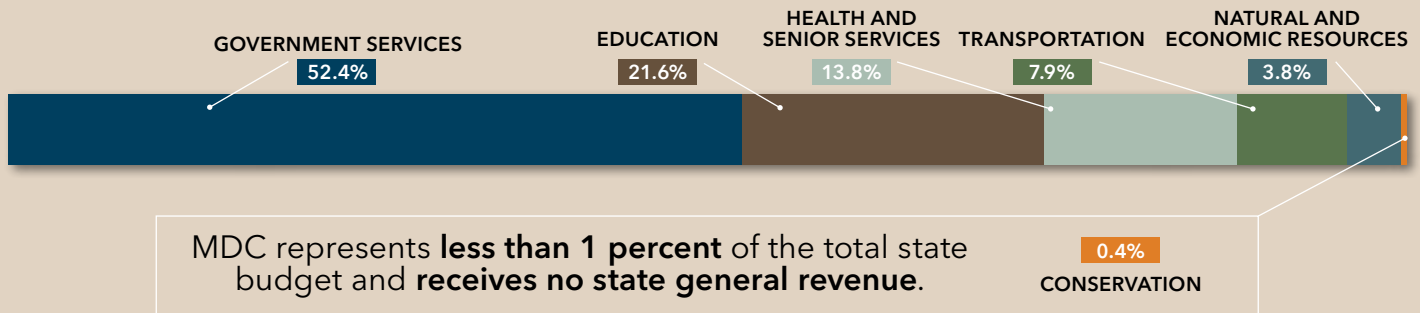
**JASON SUMNERS, DIRECTOR**



**Director Sumners assists with lake sturgeon tagging efforts on the Osage River in 2024.**

# STATE OF MISSOURI OPERATING BUDGET

TOTAL FOR FISCAL YEAR 2024: \$51,846,462,544



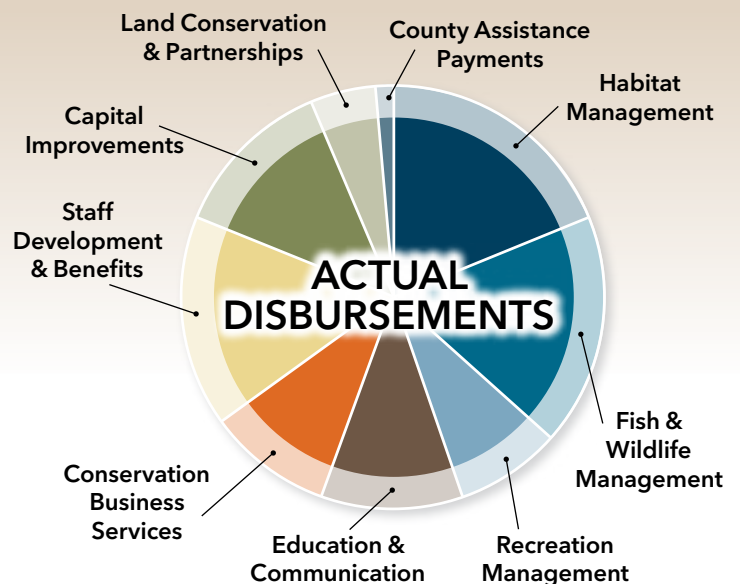
## MDC FY24 Actual Receipts

MDC gets the majority of its funding through the **conservation sales tax**. For every \$8 spent on taxable items, one penny goes to conservation.

Conservation Sales Tax	\$171,373,787
Federal Reimbursements	\$49,962,639
Permit Sales	\$43,575,289
Sales and Rentals	\$8,798,203
Interest	\$5,376,805
Other Sources	\$4,426,119

NOTE: Disbursements include all operating, other agency, and capital improvements from the Conservation Commission Fund. Other agency disbursements are appropriated outside the Department of Conservation operating budget. Fuel, benefits, and other disbursements were allocated to the appropriate branches.

OPERATING BUDGET SOURCE: Missouri Office of Administration



## MDC FY24 Actual Disbursements

Funds are distributed throughout MDC to accomplish the **state's top conservation priorities**.

Habitat Management	\$58,793,588
Fish & Wildlife Management	\$54,640,891
Recreation Management	\$24,053,649
Education & Communication	\$33,980,185
Conservation Business Services	\$28,899,393
Staff Development & Benefits	\$49,316,194
Capital Improvements	\$37,984,268
Land Conservation & Partnerships	\$15,939,705
County Assistance Payments	\$3,567,214



**MDC TAKES  
CARE OF**  
*NATURE*

We protect and manage Missouri's  
fish, forests, and wildlife, so you  
can enjoy healthy and sustainable  
resources now and in the future.

## Community Assistance Program

Since 1980, MDC has partnered with local communities through the Community Assistance Program (CAP) to provide close-to-home fishing opportunities in communities throughout the state. CAP has 183 public lakes, 27 stream accesses, three lake accesses, eight aquatic resource education ponds, and 115 partners, with four new partners added this year including the communities of Cleveland, Waynesville, Washington, and Warsaw. CAP lakes managed by MDC biologists total 10,548 acres. Additionally, the department provides CAP partners with grants to construct fishing and boating access facilities. Two infrastructure projects were completed in Bonne Terre and Cape Girardeau.



**Top:** In the spring of 2024, a grand opening ceremony was held at Bonne Terre City Lake. The project included a new concrete sidewalk, fishing platform, and a floating fishing dock. The project was implemented through an Outdoor Recreation Infrastructure Grant as part of CAP.

**Right:** Capaha Park Lake, located in Cape Girardeau, was the site of a grand opening following a project that included a lake renovation, underwater fish habitat structures and spawning habitat, two forebays, boardwalk and fishing pier meeting Americans with Disabilities Act standards, four fishing plaza access points, an aeration system, and a boat slide. The project was funded by an Outdoor Recreation Infrastructure Grant as part of CAP. Attendees included Parks and Recreation Director Doug Gannon, Mayor Stacy Kinder, Public Works Director Casey Brunke, MDC Fisheries Programs Supervisor Laura Ruman, and MDC Fisheries Biologist Salvador Mondragon.



## Aquatic Organism Passage

Guided by the Southeast Aquatic Resource Partnership, MDC co-led, with The Nature Conservancy and the U.S. Fish and Wildlife Service, the formation of a statewide Missouri Stream Connectivity Partnership (MO SCP) to address removing aquatic organism passage barriers in streams. Partners in MO SCP include county commissions and road crews, Missouri Department of Transportation, Missouri Department of Natural Resources, universities, Conservation Federation of Missouri, Stream Teams United, The Land Learning Foundation, American Rivers, United States Army Corps of Engineers, United States Forest Service, National Parks Service, United States Geological Survey, Missouri Conservation Heritage Foundation, Fort Leonard Wood, H2Ozarks, and Midwest Waters Initiative. The partnership is open to all interested agencies and nongovernmental organizations. In 2024, Crawford County, with the assistance of the MO SCP, was able to secure nearly \$1.5 million in federal funds from a bi-partisan infrastructure law to complete two bridge replacements with aquatic organism friendly crossings that are also safer for drivers, provide more reliable access, and require less maintenance. The new bridges will open 25 miles of Huzzah Creek to a variety of aquatic species, including threatened and endangered mussels and the eastern hellbender.

## Fish Passage and Transportation Improvements

Through the U.S. Fish and Wildlife Service's National Fish Passage Program, MDC staff secured grants to work with Dallas and Moniteau county commissions over the past year to coordinate replacement of low-water stream crossings. The partnership with Dallas County Commission is made possible by a \$370,000 grant to focus on a low-water replacement in the Little Niangua River Priority Geography on Simpson Road. This is the 17th low water crossing replaced in the Niangua River watershed of Dallas, Hickory, and Camden counties to benefit the federally threatened Niangua darter. In addition, through grant funding of \$370,000, local staff worked in partnership with the Moniteau County Commission to replace a low-water stream crossing in the Upper Moniteau Creek Priority Watershed on Mount Vernon Road. This is the third low-water crossing that local staff have worked on with Moniteau and Cooper counties to benefit the federally endangered Topeka shiner. These collaborative projects between county, state, and federal governments reach the common goals of providing safe, cost effective, and reliable stream crossings while also protecting aquatic life by reconnecting aquatic habitat and improving stream stability.



## Aquatic Habitat Program

A fish habitat structure improvement project grant kept fisheries biologists busy from the fall of 2022 to the spring of 2024. Bass Pro Shops partnered with Beyond the Pond, U.S. Army Corps of Engineers, and MDC to provide approximately \$200,000 to improve fish habitat in Table Rock Lake and Bull Shoals Lake. The goal was to make these two great fishing reservoirs even better. For the average angler, the size of a large impoundment may seem overwhelming. Many anglers ask, “Where should I start fishing?” On the other hand, the avid angler may also have some preferred structures that tend to hold sportfish year-round and know exactly where to go each fishing trip. In both scenarios, these fish habitat structure waypoints, found on MDC’s website or the MO Fishing App, are at the top of the list of places to go. Biologists also acknowledge these brush piles serve multiple and important roles for fish populations. These structures provide nursery habitat and protective cover for young fish and attract large, predatory sportfish species, such as crappie and bass, for the angler to pursue.

A total of 751 habitat structures were improved or newly built in Table Rock Lake and 60 large habitat structures were improved

or newly built in Bull Shoals Lake. This project builds upon a long-standing public/private partnership in the Missouri Ozarks to improve and restore fish habitat dating as far back as 2007. Since then, multiple grant projects have resulted in the creation of over 2,250 fish habitat structures on these two reservoirs combined. This most recent grant project has provided an excellent opportunity to maintain and enhance fish habitat for two of the Midwest’s most popular sport fisheries. The work that has been accomplished on these projects has served as a national example of sustaining and improving reservoir sport fish populations through large-scale habitat improvements.

The GPS locations for these sites can be found on the MDC website at [mdc.mo.gov/fishing/where-fish](https://mdc.mo.gov/fishing/where-fish).

**ABOVE:** MDC staff, along with staff and leaders from the Arkansas Game and Fish Commission, showcased their finished fish habitat structure projects and habitat barges with former MDC Director Sara Parker Pauley, Bass Pro Shop’s director of conservation (the primary donor), and the National Fish Habitat Partnership’s national director in attendance.

**INSET:** The Table Rock Barge in 2008.

Staff and partners have submitted grant applications to tackle two more lake habitat projects at Harry S. Truman Reservoir and Mark Twain Lake.

Staff and partners are improving stream habitat in Missouri as well. Six large projects have been completed in fiscal year 2024 — one for stream bank stabilization, one for riparian zone reforestation, two for livestock exclusion from the riparian zone, one for livestock exclusion and alternate watering sources, and one bridge replacement for safety and free aquatic animal passage.

**OPPOSITE PAGE TOP:** Former MDC Director Sara Parker Pauley assists with the 2024 spring paddlefish spawning activities.

**MIDDLE:** One of the Lost Valley Hatchery stocking trucks was wrapped with eye-catching graphics. This is the first of many trucks from different hatcheries scheduled for wrapping.

**BOTTOM:** Construction of the intermediate field tanks at Shepherd of the Hills Hatchery were completed by the end of summer.

## Hatchery System Updates

### Supporting Urban Fishing

Lost Valley Fish Hatchery supports the Urban Fishing Program (UFP) by providing in-house reared channel catfish from April through September every year. Staff perform 20 stocking trips during this time frame to keep these UFP lakes supplied with catchable size fish as they are managed as put-and-take fisheries. In total, there are 31 lakes in Kansas City and St. Louis that are stocked with 81,000 of these channel catfish. The shift to “in-house” production was made possible by renovation projects, infrastructure upgrades, and a reduction in the requested size from 14-inch to 12-inch-long fish.

### Warmwater

#### Channel Catfish

- Channel catfish broodstock were prepared for breeding and paired to 48 pens.
- Spawning resulted in 75 pounds of channel catfish eggs collected.
- In total, there were 626,000 channel catfish fry kept for grow-out.
- Fingerlings were distributed to all four warmwater hatcheries.

#### Walleye

- Over 12 million eggs were taken between Lost Valley and Chesapeake hatcheries and set in the hatching batteries for incubation.
- Fry were distributed to all four warmwater hatcheries to meet statewide walleye fingerling requests for this lake strain of 1,576,660 walleye.

#### Lake Sturgeon

- Lost Valley received 85,800 fertilized lake sturgeon eggs from Genoa National Fish Hatchery in Wisconsin.

#### Striped Bass

- Lost Valley received 250,000 striped bass fry to set into rearing ponds for grow-out.

#### Hybrid Striped Bass

- Lost Valley received and set 1.65 million hybrid striped bass fry into rearing ponds for grow-out.

#### Paddlefish

- Spawning efforts at the hatchery located at Blind Pony Lake Conservation Area (CA) resulted in 2.1 million paddlefish eggs collected.
- 750,000 paddlefish fry were set into rearing ponds in Blind Pony Lake CA for grow-out.

#### Tank Wrap

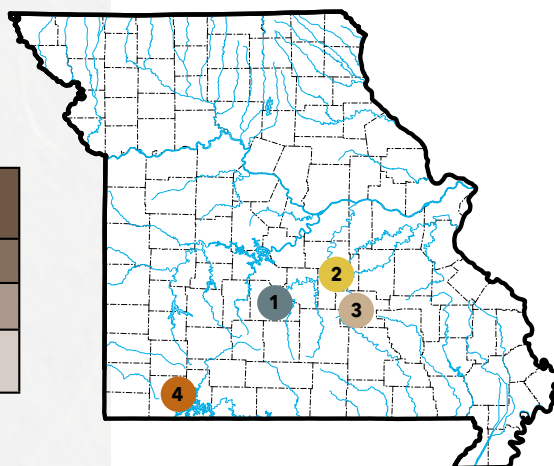
- Lost Valley's 5-ton stocking truck was wrapped this spring.
- While it transports a wide variety of fish species, it stocks channel catfish in urban Kansas City and St. Louis lakes from April through September.



### Coldwater

#### Trout Park Fishing Tag Sales

Trout Park	Bennett Spring	Maramec Spring	Montauk	Roaring River	Total
2024	128,553	46,613	88,011	111,819	374,996
2023	130,848	43,810	87,162	106,069	367,889
Percentage +/-	-1.75%	+6.40%	+0.97%	+5.42%	+1.93%



## State Record Fish Program

Missouri is blessed with many lakes and streams that provide world-class angling opportunities. MDC developed the State Record Fish Program to recognize anglers who have caught the largest recorded fish from a list of recognized species found in Missouri waters.

### Skipjack Herring

**Angler:** Anthony Rozniak

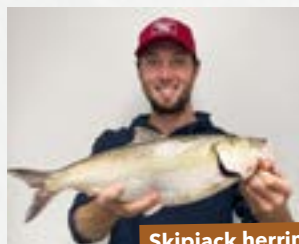
**Date:** Dec. 6, 2023

**Weight:** 3 lbs. (Ties current state record)

**Caught from:** Missouri River

**Method:** Pole and line

**Previous record:** There is now a three-way tie with a 2019 catch from the Osage River and a 2017 fish from the Missouri River.



Skipjack herring

### Yellow Perch

**Angler:** Jeffrey Needles

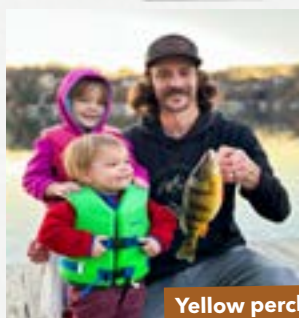
**Date:** Jan. 3, 2024

**Weight:** 12 oz.

**Caught from:** Lake Lotawana

**Method:** Throwline

**Previous record:** 10 oz., private pond, May 11, 2019



Yellow perch

### Paddlefish

**Angler:** Chad Williams, Olathe, KS

**Date:** March 17, 2024

**Weight:** 164 lbs., 13 oz.

**Caught from:**

Lake of the Ozarks

**Method:** Snagging

**Previous state record:** 140 lbs., 10 oz., Lake of the Ozarks, March 18, 2022

**Previous world record:** 164 lbs., Keystone Lake, OK, June 2021



World Record

Paddlefish

### Bighead Carp

**Angler:** George Chance

**Date:** March 19, 2024

**Weight:** 97 lbs.

**Caught from:** Mississippi River

**Method:** Pole and line

**Previous state record:** 80 lbs., Lake of the Ozarks, Oct. 9, 2004

**Previous world record:** 90 lbs., Guntersville Lake, TN, June 2005



World Record

Bighead carp

## George O. White State Forest Nursery Celebrates 90 Years

The George O. White State Forest Nursery has placed millions of trees on the state's landscape since it began in 1934, and it celebrated its 90th anniversary on April 6, 2024, with a public open house. Staff conducted tours that provided insight into the science and technology needed to produce more than 2 million seedlings that are allocated annually to meet public and private tree needs around the state. People also had the opportunity to learn how seeds are processed for planting and how 70 species of trees are grown at the nursery. Other events that day included a fishing clinic at the nursery lake and the opportunity to see the portable sawmill in operation.

The state nursery raises trees for forestry projects on public and private lands, but much of the facility's focus has shifted to serving the tree needs of Missouri's citizens. Today, approximately 2.25 million seedlings grown at the 100-acre nursery are allocated to public and private needs around Missouri and elsewhere. Many of these seedlings go to Missouri landowners who want to improve habitat on their land. MDC's annual tree seedling sales run from Sept. 1–May 1. This popular program allows landowners to purchase bundles of seedling trees from the nursery. Bundle sizes vary, depending on the purpose of the planting, but most range between 10 and 25 plants. The nursery also collects thousands of pounds of seed each year, much of which is purchased from the public.

## MDC Maintains Sustainable Forestry Initiative® Certification

Over 670,000 acres of Missouri's conservation areas have been certified by one of the world's most recognized forest management standards, the Sustainable Forestry Initiative® (SFI).

SFI certification is based on principles, performance measures, and indicators built through a collaborative effort from not only the forest sector, but also resource professionals, conservation groups, academics, brand owners, landowners, and governments. The scope of the program is to balance environmental, social, and economic objectives, which include in part conservation of wildlife habitat and biological diversity; sustainably harvesting forest products; protecting water quality and special sites; providing training and education of employees, landowners, and contractors; and providing recreational opportunities.

Successfully maintaining SFI certification makes MDC a sustainability leader. Working together, SFI and MDC can broaden the practice of responsible forestry and expand the connection between forests and communities. Certification helps make a link between well-managed forests and the public benefits that affect all of us every day.

As part of its certification, MDC is required to undergo annual surveillance audits as well as full certification to the SFI Forest Management Standard every five years. The audits are conducted by an independent, accredited third party certification body.

## Prescribed Fire

Approximately 42 million acres of Missouri land are privately owned outside the jurisdiction of any state or federal agencies. Recognizing the benefits of prescribed fire when applied to the landscape, MDC works with several nongovernmental organizations and the U.S. Forest Service (USFS) to provide grant funding and services for interested landowners. Through FY24, MDC was able to provide prescribed burning equipment to five Prescribed Burn Cooperatives. The equipment was provided by the USFS Eastern Region's State, Private, and Tribal Forestry, Bipartisan Infrastructure grant program. In addition to providing this equipment grant, MDC offers Prescribed Burning for Missouri Land Managers, a prescribed burn workshop for private landowners. This workshop involves online course requirements and a field exercise where participants meet with fire professionals. Once a landowner completes the course, they are recognized and certified as a prescribed burn manager. Since May 2024, MDC staff have hosted 92 field exercises and certified 2,286 private landowners.

## Volunteer Fire Assistance

Through an annual Volunteer Fire Assistance grant program, MDC awarded \$582,537 to 125 rural fire departments to purchase personal protective equipment, communications equipment, and wildfire/structural fire suppression equipment in FY24. This grant opportunity is provided primarily through a partnership MDC maintains with the USFS Eastern Region's State, Private, and Tribal Forestry.

## Wildfire

Going into FY24, Missouri was experiencing effects of drought conditions, which continued through May. Missouri received significant rainfall in June, relieving most of the drought conditions. Before rainfall arrived, MDC staff and partnering fire departments experienced several days of significant fire weather, including periods of high winds, leading to more and larger wildfires. Through FY24, Missouri experienced 1,582 wildfires, affecting 33,482 acres of the state's landscape.

Heavy smoke was reported in the Current River Valley on March 24, and the source was discovered as a wildfire in the middle of Sunklands Natural Area, which was spreading quickly due to the rugged remote landscape and intense weather. MDC staff — including 14 crew members, four fire dozers, a Pioneer Forest staff member — and local volunteer firefighters responded and fought the fire until dawn. Due to this teamwork, the fire was contained at 2,633 acres with many structures saved and damage to sensitive natural communities minimized.



## Schell-Osage Conservation Area Wetland and Lake Renovation

MDC held a groundbreaking ceremony April 24, 2023, for a \$6.4 million pump station project at the Schell-Osage CA in northeastern Vernon County. The pump project was completed in July 2024. This is the first of three phases in a long-planned wetland and lake renovation. The project will improve the area's wetlands for a wide variety of waterfowl, shorebirds, and wading birds, and it will improve Schell Lake for fishing. These changes will enhance opportunities for waterfowl hunters, birders, wildlife watchers, and anglers.

Schell-Osage CA was developed along the Osage River and is one of MDC's oldest wetland and upland conservation areas. But much has changed since wetland development began in 1962 and wetland pools were opened to managed waterfowl hunting in 1964. Schell-Osage CA lowlands are now in the upper end of Truman Lake. Extreme weather and high-water levels within Truman Lake have caused repetitive, and therefore expensive, flood damage to area levees. Not all the change has been negative, though, because being adjacent to Truman Lake provides access to a much larger water source than when the area was first developed.

The permanent concrete pump station will draw water from the Osage River arm of Truman Lake. This source replaces water from Schell Lake and Atkinson Lake as well as portable pumps into Truman Lake, which were less efficient, safe, and reliable. The pump station will give area managers better control to fill wetland pools during autumn and spring waterfowl migrations, and it will reduce water level fluctuations in Schell and Atkinson lakes.

In coming phases, a redesign and rebuild of wetland levees will be at angles more in line with natural hydrology. They will use natural high points as anchors and be built with natural contours less prone to damage from flowing floodwater. The number of waterfowl hunting positions will be retained, and the new concrete hunting blinds will be built into mounds that will blend better into the landscape and can also function as habitat for wildlife.

Schell Lake will be renovated. The project will create more water depth diversity to enhance fishery habitat. An improved boat ramp and new jetties around the perimeter will increase access for bank anglers.



Grassland at Dunn Ranch

## 2024 Missouri Native Grasslands Summit

Grassland habitats in Missouri are critically important to many suites of species and are declining in most parts of the state. The first ever Missouri Native Grasslands Summit was held April 9–11 in Jefferson City and was hosted by MDC, the Conservation Federation of Missouri, and the Natural Resources Conservation Service. The objective for the summit was to increase participants' knowledge of grasslands, build relationships, and continue building partnerships to advance grassland conservation for diverse fish

and wildlife resources and for production of forage. The summit was for state and federal agency staff, public and private grassland researchers, agricultural producers, managers, not-for-profit and nongovernmental organizations, hunters, birders, and any conservationist interested in helping shape the future of grassland conservation in Missouri. Over 350 people attended to hear presentations and discussions from a wide variety of experts, professionals, agricultural producers, and other interested parties on the state of grassland conservation in Missouri.

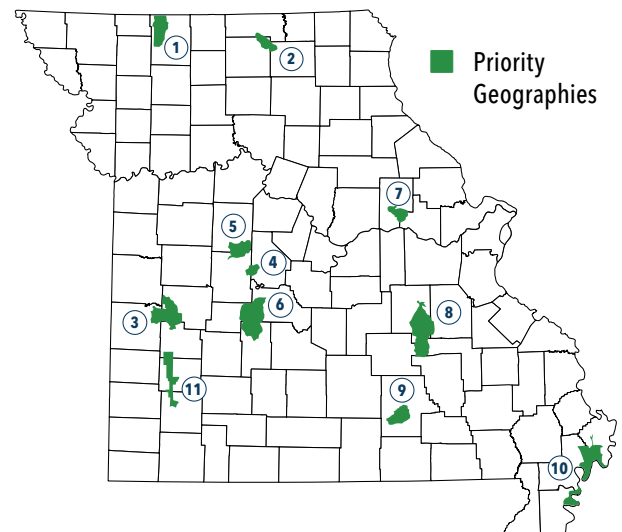
## Missouri Comprehensive Conservation Strategy

In FY23, MDC reestablished the Comprehensive Conservation Strategy (CCS) working group, which provides guidance to CCS implementation. This committee is comprised of a diverse group of staff from a wide variety of disciplines within the department. In FY24, the CCS working group continued while the department created the Landscape Assessment and Monitoring Strategic Initiative, which focuses resources on developing tools to assess and monitor the effectiveness of conservation actions within priority geographies. This work is being accomplished by developing achievable and desired future conditions using the Missouri River Hills, located north of the Missouri River between Jefferson City and St. Louis, as a pilot and implementing a baseline landscape health index for each

priority geography in the coming years. These efforts will assist teams and partners in further determining where and what types of activities to focus on to help improve the habitat quality at a landscape scale.

Missouri now has 11 priority geographies, adding the Golden Grasslands during FY24. Golden Grasslands is located within Cedar, Dade, and Lawrence counties, encompassing a key portion of the Golden Grasslands Conservation Opportunity Area. This area contains many critically imperiled remnant prairies and plant and animal species of conservation concern. Focused work in this area is resulting in improved native grasslands and livestock forage on public and private working lands. Within each of the 11 priority geographies, dedicated interdisciplinary teams continue to work with partner organizations and private landowners to implement landscape scale conservation.

## MISSOURI PRIORITY GEOGRAPHIES



- |                           |                          |
|---------------------------|--------------------------|
| 1. Grand River Grasslands | 6. Little Niangua River  |
| 2. Spring Creek Watershed | 7. Missouri River Hills  |
| 3. Upper Osage Grasslands | 8. Shoal Creek Woodlands |
| 4. Big Buffalo Creek      | 9. Mahan's Creek         |
| 5. Hi Lonesome            | 10. River Bends          |
|                           | 11. Golden Grasslands    |

## Missouri Natural Areas System and Natural Community Management Evaluation

Missouri continues to manage a strong natural areas program under the guidance of the Missouri Natural Areas Committee (MoNAC). This year, MoNAC approved nomination of Bennett Spring Savanna Natural Area, owned by The Nature Conservancy, and expansions of MDC's Paint Brush Prairie and Weldon Spring Hollow natural areas. These areas are outstanding examples of savanna, woodland, prairie, and forest natural communities in conservation opportunity areas and a priority geography.

Department staff organized a glade and woodland restoration workshop and a Natural Communities 101 workshop with over 50 department staff participating.

In cooperation with the Mark Twain National Forest (MTNF), University of Missouri, and department natural history biologists, community health index models (CHI) were completed for Ozark oak, pine-oak, and glade natural community groups. Results from sampling pine-oak CHIs were shared at the Shortleaf Pine Summit in July 2023 and at the 2024 Missouri Natural Resources Conference. A report on ecological monitoring for the MTNF Collaborative Forest Landscape Restoration Project using CHIs was published in February 2024.

Department staff along with the Natural Areas Association and Kansas City Wildlands hosted a stewardship in action workshop in Kansas City for 25 participants from a variety of states and agencies/organizations in August 2023.

## Invasive Species and Disease

The Invasive Species Program provides coordination and strategic guidance to department branches, collaboration with partners, and communication and education to the public. The Invasive Species Working Group is an assemblage of agency specialists representing a diversity of invasive species related expertise. The group serves to provide strategic guidance within MDC and address invasive species related needs and challenges. In FY24, the working group began developing best management practices for prevention document, and provided reviews for outreach materials, novel equipment permits for invasive carp removal, and regulation changes related to invasive species.

The Invasive Species Program collaborates with partners across the state and region, including Missouri Invasive Plant Council, Missouri Invasive Forest Pest Council, Invasive Species Strike Teams, Scenic Rivers Invasive Species Partnership, Mississippi River Basin Panel, and others, to promote awareness and implementation of effective management and conservation efforts that protect healthy land, water, and forests on public and private lands in Missouri.

Public outreach and education on an array of invasive species topics were provided through a variety of formats and outlets including quarterly articles in *Missouri Conservationist*, presentations to volunteer groups including Master Naturalists, social media posts, the annual Invasive Species Day Event at the Missouri State Fair, and production of nine invasive species outreach videos in collaboration with U.S. Fish and Wildlife Service and U.S. Army Corps of Engineers.

## Invasive Carp Removal

In September 2023, MDC, in conjunction with the U.S. Fish and Wildlife Service and Kansas Department of Wildlife and Parks, conducted an invasive carp removal on the lower Grand River in northwest Missouri. Intensive efforts using commercial nets and electrified fish capture equipment resulted in over 19 tons of invasive carp including more than 10,000 silver carp being removed from the lower Grand River with an estimated 27 percent decrease in overall silver carp densities. In addition to benefiting our native aquatic communities, this effort is a great example of building partnerships with other agencies. The knowledge gained from this removal effort can aid biologists on future control and management actions of invasive carp in Missouri River tributaries.



Silver carp

## Feral Hog Elimination

As a member of the Missouri Feral Hog Elimination Partnership, MDC has joined 14 other federal and state agencies, as well as agriculture and conservation nongovernmental organizations, to eliminate feral hogs from public and private lands throughout Missouri. In 2020, the partnership established a unified incident command system to manage feral hog elimination in the state. Since 2016, the partnership has eliminated feral hogs from 269 watersheds in the state. These watersheds cover approximately 6.7 million acres, a decrease of 60 percent of

Missouri land previously occupied by feral hogs. During 2023, the partnership removed 7,885 hogs from the landscape, assisted 660 landowners, and scouted more than 3.8 million acres. In addition to on-the-ground operations, the partnership placed equipment at Soil and Water Conservation District offices for landowners to use in areas with high feral hog activity; distributed mail-out landowner surveys to collect information regarding feral hog damage, mitigation, and removal efforts; and conducted landowner and community outreach activities throughout the southern portion of the state.

## Resource Management Training

The Resource Management Training Program provides MDC employees with learning opportunities to increase professional development on topics mainly related to aquatic and terrestrial natural communities, fisheries, forestry, wildlife, and fire management. More than 750 MDC employees and employees from partner organizations attended nearly 50 classes on topics such as stream management, water quality monitoring, forest soils, fire management, GIS for resource managers, implementation of our tiered approach to habitat management, agricultural crops, wildlife conflicts, glade and woodland management, forest soils, fire management, natural communities, bird ID, aquatic plant ID, forest health, native Missouri bees, and more. Other highlights include partnering with the Boone and Crockett Club to train 30 employees to become Boone and Crockett and Pope and Young scorers. We also partnered with Auburn University's Parasite and Disease Laboratory staff to offer two Fish Health and Disease workshops.

These training opportunities provide staff and partners with the tools to implement on-the-ground management of our fish, forest, and wildlife resources.

A Resource Management Training Conference was held to provide employees from across resource management disciplines the opportunity to hone their skills, learn from other disciplines, and network across branch and regional lines.

The agency also has a multi-disciplinary Training and Development Working Group responsible for providing guidance and direction for continuous employee development to department staff statewide. This group finalized their team charter, developed program objectives, and is working towards a standardized post-workshop training evaluation to better collect information on and assess how we as an agency are developing our staff.

## Modification to Turkey Hunting Season

MDC conducted a review of the spring and fall turkey hunting seasons, which included a hunter survey and open public comments during the fall of 2023. The Conservation Commission approved MDC's recommendation for changing the 1 p.m. daily closure on private land during the spring season to sunset. Although there is potential for an increase in gobbler harvest (estimated to be less than 10 percent), the goal is to provide more opportunity for those who don't yet hunt or are limited by other commitments. The Conservation Commission also approved MDC's recommendation for modification to the fall turkey hunting permits. This change combines turkey permits into a single permit and functionally reduces the fall bag limit from four to two turkeys of either sex. This modification is a balance of management of the turkey population, opportunity, and public input.

## CWD Management, Deer Season Regulation Changes

To adapt to the changing status of chronic wasting disease (CWD) in Missouri, MDC's CWD Surveillance and Management Plan was revised in 2022. The original plan was developed after detecting the first case of the disease in the state in 2010, then revised in 2015. In addition, a CWD Strategic Initiative has been created to enhance and advance the CWD surveillance and management program. For example, a pilot study took place in fall 2024 to evaluate the ability of hunter harvest to achieve removal goals in CWD core areas during the deer hunting season, thus creating efficiencies in our management efforts. Other objectives include increasing our statewide surveillance efforts by developing county-level CWD surveillance goals, improving communications about CWD to ensure effective outreach and engagement, and conducting research to evaluate the factors that influence the success of targeted removal and help inform future CWD management efforts.

To help keep deer numbers at desirable levels and to help minimize the spread of CWD, there were several regulation changes implemented during the 2023 deer season. These included a new early antlerless portion of firearms deer season in 100 counties, a new CWD portion of firearms deer season in the 52 CWD Management Zone counties, and an increase from two to four firearms antlerless permits in most counties. These changes contributed to a record total harvest during the 2023 deer season of 326,448 deer and a record harvest of antlered bucks (147,850). The season was also the first year in a decade that hunters harvested more does than antlered bucks, which is significant given the need to increase antlerless harvest in most counties to stabilize Missouri's growing deer population. Also, during FY24, MDC began the process of revising its 10-year White-tailed Deer Management Plan, which will be completed early in FY25.



White-tailed deer

Wild turkey

A photograph of a forest path with sunlight filtering through the trees. The path is made of gravel and is surrounded by green foliage and trees. The sun is shining from behind the trees, creating a bright glow and lens flare effect.

# MDC CONNECTS *PEOPLE* WITH NATURE

We provide places for you to  
enjoy nature and opportunities  
for you to learn about and  
discover nature.

**MDC** manages approximately 1,000 conservation areas that provide places for people to connect with nature in a variety of ways.

This includes nearly 450 general conservation areas that offer nearly 100 natural areas managed as examples of the many natural communities present throughout the state such as grasslands, woodlands, forests, and glades. There are also more

than 300 accesses scattered across the state to help people enjoy the different types of freshwater resources available to Missourians and visitors alike. From hunting, fishing, birdwatching, bicycling, hiking, floating, camping, horseback riding, or just about any other outdoor activity, there is an area managed by MDC that is awaiting a new or continued adventure.

### St. Louis Green Jobs Training Program

In partnership with Employment Connection of St. Louis, The Nature Conservancy, and Mysun Foundation, MDC recently implemented the second cohort of the St. Louis Green Jobs Training Program.

The seven-week Green Jobs program is anchored in the Roots of Success curriculum, an empowering environmental literacy and job training program that prepares youth and adults to access jobs and career pathways in environmental fields and improve environmental and social conditions in their communities. Trainees also attend the World of Work program, which prepares individuals for interviewing and helps increase their skills to gain employment. After completing the course, a dedicated career specialist assists trainees with job leads, preparation, interviews, and placement. Trainees also receive certifications in occupational safety and CPR/first aid.

A key component of the program is the connection with partner organizations throughout the curriculum. MDC worked with project partners to organize 14 work/field days, all with different organizations that offer employment opportunities. In addition to MDC, the cohort worked with the City of St. Louis, Beyond Housing, AmeriCorps, Great Rivers Greenway, Missouri Botanical Garden, and several other community-based organizations. During the workdays, the crew planted trees, controlled invasive species, collected seed, performed stormwater maintenance, and learned about community conservation best practices.

### Build Trybe Conservation Landscape Program

One of MDC's community conservation efforts is focused on training a workforce to eventually produce more conservation land stewards in Missouri. Through a collaboration with Cornerstones of Care, the Build Trybe Conservation Landscape Program was developed in partnership with MDC. The initiative has already resulted in the hiring and training of eight young adults from local foster care and other underrepresented populations. These youth have engaged in various in-the-field educational activities, including removing invasive honeysuckle at the Heartland Overlook Preserve, beautifying the Ozanam and Gillis campuses with native plantings, working on the Kessler Park trails with Jerusalem Farm, planting trees at the Ivanhoe Farmer's Market with Kansas City Community Gardens, planting seeds at KC Farm School, sorting recycling at Red Bridge Recycling Center, and even kayaking on the Blue River with Heartland Conservation Alliance to explore the water and the area.

To date, three participants have successfully graduated, including one who has already secured employment with an environmental and social justice nonprofit in Kansas City, while the other two continue to work with Cornerstones of Care to secure their first conservation jobs. The program is ongoing and continues to accept new participants, with more graduations anticipated in the coming months. This is just one example of an outstanding partnership that resulted from the department's community conservation efforts, with more collaborations underway.



## Educating the Public about Nature and the Outdoors

MDC provided more than 6,000 nature-based education programs to approximately 340,000 citizens last year. Staff intentionally sought out new audiences in FY24; approximately 37 percent of program attendees reported they had never participated in an MDC-led program. Programs are offered virtually and in-person at nature centers, interpretive centers, and ranges in partnership with communities. The topics of these programs vary significantly, including native plants, archery, fishing, habitat management, kayaking, hunting, shooting sports, and much more.



**37% of FY24 program attendees reported they had never participated in an MDC-led program.**

## Partnering to Promote the Health of Humans, Animals, and the Environment

In alignment with the wisdom illustrated through conservation pioneer Aldo Leopold's land ethic, MDC continues to embrace One Health principles — that the health of humans, animals, and the environment are all important individually and are interconnected to the health of one another. For example, MDC partnered with the Missouri Chapter of the American Academy of Pediatrics and the Missouri Child Psychiatry Access Project to host a series of continuing medical education seminars across the state at MDC nature centers. The seminars provided an opportunity for physicians to connect the value nature provides to their professional practice. You can find more information about the health benefits of nature online at [research.mdc.mo.gov](https://research.mdc.mo.gov).

## Introducing an Online Application for Special Use Permits

Some activities on MDC conservation areas (including groups of more than 10 people camping, horseback riding, bicycling, and using shooting ranges) require a special use permit. Traditionally handled with a paper form, MDC transitioned to an easier online application in July 2023. Learn more and apply online at [mdc.mo.gov/SpecialUsePermit](https://mdc.mo.gov/SpecialUsePermit).

## Engaging Missourians through Community Conservation

Community conservation is the process of engaging local governments, citizens, and private organizations within municipalities and adjacent developing areas to connect people with nature; raise awareness of the community benefits provided by healthy fish, forest, and wildlife resources; and promote conservation of these resources through technical assistance encouraging development practices that protect native fish, forest, and wildlife diversity.

## Recruiting, Retaining, and Reactivating Missouri's Hunters and Anglers

MDC has committed to the future of hunting, trapping, fishing, and recreational shooting by recruiting, retaining, and reactivating (R3) outdoor enthusiasts around the state. For the first time in three years, Missouri saw an increase in hunting participation. Efforts to increase participation include outreach initiatives, studies focused on simplification of hunting and angling regulations, and evaluations of R3 educational programs to ascertain efficacy.

## Funding Outdoor Recreation for All Missourians

MDC's Outdoor Recreation Infrastructure Grant is a reimbursement-based grant program for enhancing public access and opportunities for citizen engagement in conservation-related outdoor recreation through the development of outdoor recreation infrastructure. As a result of these cooperative efforts, three new shooting ranges opened. Archery ranges in both Macon and Scott City are providing safe, convenient opportunities for archers to hone their craft, while a firearms range in Campbell allows for rifle, pistol, and trap shooting. Additionally, an area in north Springfield now has an accessible trail where such opportunity has not traditionally existed thanks to a partnership with a local nonprofit and church. And an education pavilion now sits at a highly used trailhead in Kirksville where residents, guests, and students alike can access and learn more about the outdoors thanks to a partnership with a nonprofit formed by a group of passionate outdoor enthusiasts who desire greater use of Missouri trails.

## Providing Learning Opportunities for Students

### Curriculum

MDC's partnership with Missouri's public and private schools has grown to more than 2,700 classrooms in 1,312 schools, or approximately 44 percent of Missouri schools. MDC provides a suite of nature-based curricula, teaching supplies, and transportation grants, allowing schools to connect students to nature while addressing academic standards. The recently revised kindergarten, first, and second grade Discover Nature Schools curriculum was designed to meet state and national science standards in physical, earth and space, life, and engineering sciences while exploring Missouri-focused conservation topics. The new kindergarten and first grade curriculum was adopted by over 400 classrooms in the first year.

### MoNASP

The Missouri Archery in the Schools Program (MoNASP) has been adopted by over 535 schools, with the most recent state tournament drawing approximately 5,000 student archers from more than 200 schools. MoNASP helps build stronger, more confident, and accomplished kids while teaching young people the basics of archery in school. In the past year, 12 Missouri archers received scholarships totaling \$40,000 from the Missouri Conservation Heritage Foundation and MoNASP. Many went on to national competitions, and several seniors are being recruited with additional scholarships to schools that have or are creating collegiate archery teams.

### Hunter Education

Last year more than 27,000 students earned their hunter education certification. Of those, more than 7,000 students earned their certification in one of the 242 schools using the curriculum in the classroom. Hunter education focuses on ensuring students are responsible and safe hunters, while also helping students understand the fundamentals of wildlife management.



### Discover Nature — Fishing

Discover Nature — Fishing (DNF) provides curriculum, teaching supplies, and transportation grants to participating schools. Currently, 183 schools are using the DNF curriculum. MDC strives to get students hooked on fishing so they can enjoy this life skill with family and friends for years to come.

### Show-Me Snails

The Show-Me Snails project kicked off its fifth year of volunteer monitoring to collect aquatic snails for identification. This ongoing project will help expand existing snail distribution records and inform future water-quality criteria for the state of Missouri. Last year, 57 Stream Team volunteers registered to help with Show-Me Snails, and 155 aquatic snail samples were submitted to MDC for identification.

### Building Conservation Volunteers and Citizen Scientists

Volunteers at MDC's interpretive sites, nature centers, and staffed shooting ranges contributed more than 40,000 hours of service to conservation. These volunteers assisted with special events, school and public programs, visitor relations, animal care, and area maintenance. Volunteers work with department staff to make the visitors' experience at these facilities educational, enjoyable, and memorable. Volunteer hunting and fishing education instructors contributed more than 9,500 hours to connect Missourians to the outdoor pursuits of hunting and fishing. In addition to teaching people new skills, these volunteers help instill a conservation ethic and an understanding of natural resource management in their students.

Participants who are part of MDC's affiliated volunteer programs with partner organizations have an opportunity to work on a variety of citizen science projects with communities around the state, including programs such as Missouri Stream Team, the Master Naturalist Program, and the Missouri Forestkeepers Network.

**OVER 27,000**

HUNTER EDUCATION CERTIFICATES  
EARNED BY MISSOURI STUDENTS

**5,000**

STUDENT ARCHERS IN  
THE STATE TOURNAMENT

**44%**

OF MISSOURI SCHOOLS  
PARTNER WITH MDC

## Missouri Stream Team

The Missouri Stream Team program educates Missourians on the nature and quality of the state's streams and how to take care of them through volunteerism. Stream Team volunteers serve as stewards for Missouri's 110,000 miles of flowing water and do hands-on projects, such as litter pickups, water-quality monitoring, storm drain stenciling, and streamside tree planting. The program is a partnership between MDC, the Conservation Federation of Missouri, and the Missouri Department of Natural Resources.

This past year, teams throughout the state dedicated 53,466 service hours for a variety of activities. These service hours included 39 habitat improvement projects, the planting of 395 trees for water-quality improvement, 308 water-quality monitoring trips, and the removal of 187 tons of trash from Missouri waterways.

During the past year, the Stream Team program partnered with Beyond Housing, Greenway Network, Greenwood Cemetery, Spanish Lake Clean and Green, Missouri American Water, and residents to clean up trash and debris in the North St. Louis communities of Castlepoint, Spanish Lake, Wellston, and Pine Lawn. A total of 256 tires, 975 pounds of metal, and 18 tons of trash were removed from St. Louis streams because of these efforts.

## Missouri Master Naturalist Program

The Missouri Master Naturalist program is sponsored and jointly administered by MDC and University of Missouri Extension. As a partnership program, Master Naturalist is committed to growing and sustaining an equitable, diverse, and inclusive learning and working environment to engage Missourians in the stewardship of our state's natural resources through science-based education and volunteer community service. The program aims to improve public understanding of natural resources ecology and management by developing a pool of local knowledge that can be used to enhance education efforts within local communities. A second goal is to enhance existing natural resources education and outreach activities by providing natural resources training at the local level, thereby developing a team of dedicated and informed volunteers.

With 12 chapters and 855 volunteers statewide, Missouri Master Naturalist Program participants partnered with 135 local organizations and provided over 71,000 hours of volunteer community service during the past year. Most chapters participated in seed collections and native plantings with partner organizations in their local communities. Of special mention is the Osage Trails Chapter that collected 93 pounds of seeds in partnership with Dunn Ranch. All chapters contributed to education and outreach. Hannibal's Mississippi Hills Chapter provided over two dozen guided educational hikes for their communities.

Chapters were highly active with citizen science projects. Thirty Master Naturalists assisted with MDC's chronic wasting disease surveillance. Volunteers also assisted with MDC's Eagle Watch Program, bat counts, and herp surveys. The newest MDC citizen science addition this year is Sturgeon Watch. For Sturgeon Watch, volunteers from St. Charles' Confluence Chapter, St. Louis' Great Rivers Chapter, and Washington's Miramiguo Chapter are measuring lake sturgeon that are observed spawning along the Mississippi River. Other citizen science service activities included Audubon's Christmas Bird Count, Missouri Stream Team, and the Bumble Bee Atlas

## Missouri Forestkeepers Network

The Missouri Forestkeepers Network is an opportunity for all Missourians — urban and rural — to get involved in monitoring and improving the health of Missouri's forests. The network's mission is to develop a network of informed citizens working to conserve, sustain, and enhance Missouri's urban and rural forest resources through volunteerism, advocacy, and management. Through volunteer and community science efforts, network members can track the health of our state's forests and care for the trees that shelter and shape us. The program is a joint effort of MDC and Forest ReLeaf of Missouri.

With more than 3,130 members, network participants contributed approximately 9,000 hours planting, seed collecting, and monitoring Missouri forests in the past year. Members learned about the challenges and processes of seed collection through a visit to the George O. White State Forest Nursery. This experience featured a workshop on collecting and processing seed as well as a tour of the state nursery grounds and facilities. Members also launched a witch hazel bloom study, worked locally to remove invasive plants, and cared for trees in their backyards and farms. Members' efforts assure Missouri's forests continue to grow and stay healthy.



Witch hazel blooms

**187 TONS**

OF TRASH REMOVED FROM  
MISSOURI WATERWAYS

**855**

MASTER NATURALIST  
VOLUNTEERS

**OVER 3,130**

MEMBERS IN THE MISSOURI  
FORESTKEEPERS NETWORK

A young boy is seen from behind, standing on a wooden dock or pier. He is wearing a blue t-shirt with a graphic on the back and a grey baseball cap. He is holding a fishing rod in his right hand, which is bent, showing he has caught a small fish. His left hand is raised in the air, making a peace sign. The background is a calm body of water reflecting the warm, golden light of a sunset. The sky is a mix of orange, yellow, and soft blue. The overall mood is peaceful and recreational.

# MDC MAINTAINS *PUBLIC TRUST*

We want you to be confident the finances dedicated to Missouri conservation are used wisely, and decisions concerning Missouri's fish, forests, and wildlife are guided by the best available science.

## Performance Excellence

MDC is on the journey to performance excellence. Using best practices in the areas of leadership, strategy, customer, data and information, workforce, and operations set in the Malcolm Baldrige Performance Excellence framework, MDC responded to a series of questions that describe the processes and results for each of the categories. MDC received a site visit in December 2023 where a team of examiners interviewed a series of employees that work directly with the processes to validate MDC's performance in the categories. In June 2024, MDC was recognized for its progress through the regional program sponsored by the Quality Texas Foundation.

## Design for the Future

MDC has a revised Design for the Future Strategic Plan. With the continued focus on the three goals — Take Care of Nature, Connect People with Nature, and Maintain Public Trust — MDC has further defined strategic priorities and initiatives that align with the goals and outcomes.

## New Leadership

With Director Sara Parker Pauley's retirement at the end of May 2024, MDC continues to develop and promote internal leaders. The Conservation Commission named Jason Sumners as the new department director, effective June 1, 2024. Andrew Bond was named as the new deputy of business and operations and Laura Conlee as the new deputy of resource management.

## Trust in MDC

Ongoing survey efforts with Missourians indicate a continuous trend of high-level public trust in MDC, with three-quarters indicating they agree they can trust in the department.

## Employee Retention

MDC invests in its team and remains an employer of choice with an annual employee retention rate of better than 94 percent.

**MDC REMAINS AN EMPLOYER OF CHOICE WITH AN ANNUAL EMPLOYEE RETENTION RATE OF BETTER THAN 94 PERCENT.**



Missouri's conservation agents are some of our most recognized employees. Assigned to counties throughout the state, agents serve as local representatives of the department and the Conservation Commission. They have a vast knowledge of the department, which enables them to enforce the *Wildlife Code of Missouri*, serve as local contacts, and provide needed educational programs in our communities.

# Get Outside

in JANUARY



→ Ways to connect with nature

Red fox

Kentucky coffee tree pods

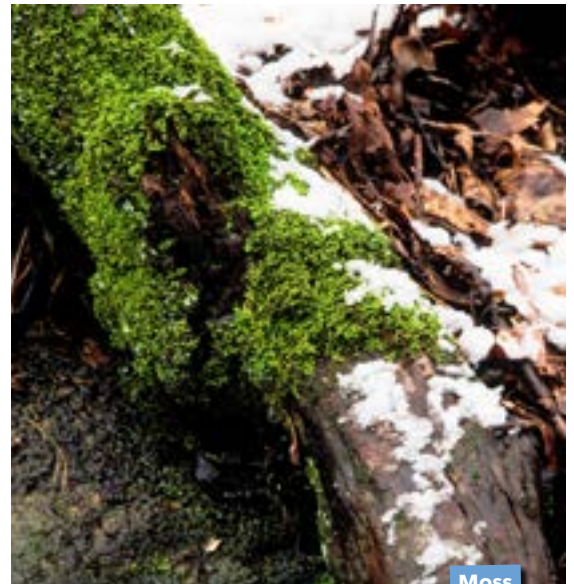
## Coffee and Syrup from the Woods?

With the trees bare, look for large pods dangling from the branches of Kentucky coffee trees. These leathery, unopened pods contain seeds that Native Americans used to roast and grind to make coffee, giving the tree its common name.

While you're out enjoying the winter woods, look for Missouri's sugar maple trees. You can tap these to make your own maple syrup. The best time to tap for most of Missouri is mid- to late January or early February. For more information on maple sugaring, visit [short.mdc.mo.gov/4N4](https://short.mdc.mo.gov/4N4).

Coffee and syrup ... you have the beginnings of a tasty breakfast.

Tap in a sugar maple tree



Moss

## Need Some Green?

Missouri in the winter can look pretty dreary. If you need a boost of color, take a hike! With the trees lacking leaves, sunlight is permitted to reach all the way to the forest floor where some of Missouri's nonwoody plants remain green through the winter, including several types of ferns and mosses. If you need help identifying what you're seeing, MDC's online *Field Guide* has you covered. Visit [short.mdc.mo.gov/Z9d](https://short.mdc.mo.gov/Z9d).

### Natural Events to See This Month

Here's what's going on in the natural world.



Gulls visit large lakes and rivers.



Beavers begin breeding.



Ozark witch-hazel begins blooming.

## What's That Sound?

**Red fox** mating season peaks in January and February, as does their nighttime barking. The males emit a loud, sharp, and sometimes aggressive bark with a *hup-hup-hup* rhythm. Females let out a more piercing, high-pitched screamlike bark.

**Great horned owl** breeding occurs in late January or early February, following a few months of hooting. You can identify it by ear — listen for its three to eight deep hoots grouped in a pattern such as *hoo h'HOO, HOO, HOO*.



Great horned owl

## Who Will be First?

After the chill of winter wears off, who will be the first to emerge and commence with springtime activities?

The **horned lark** is one of Missouri's earliest nesting birds. Courtship songs and displays begin in January and February. The male flies up several hundred feet, giving a tinkling song at its highest ascent. Then it zooms, dartlike, to the ground, opening its wings at the last minute. Look for them in large open areas with extensive bare ground. They are especially common in plowed agricultural regions, nesting early before vegetation has a chance to grow tall. Their camouflaged upperparts make them inconspicuous, but they often occur in flocks, and their movement against the ground, songs, and their distinctively marked faces and feathery horns, can help you see them. Boreal chorus frogs and **spring peepers** will be some of the first amphibians we will hear. They overwinter in the soil and do not burrow very deep. A natural antifreeze in their blood keeps them from freezing.



Horned lark



Spring peeper



Dark-sided salamanders breed.



Deer feed on sumac berries.

# Call Before You Cut

## 5 REASONS TO CALL BEFORE YOU CUT

- ✓ Learn if harvesting is right for you and your woods
- ✓ Harvest the proper trees to ensure a healthy forest
- ✓ Find a trained logger for the job
- ✓ Maximize timber sale income and save \$\$\$ on taxes
- ✓ Ensure your overall satisfaction with the timber harvest

**Request a free informational packet about working with a professional forester to take care of your woods.**

**[callb4ucut.com](http://callb4ucut.com)  
877-564-7483**

# Places to Go

KANSAS CITY

## J.N. "Turkey" Kearn Memorial Wildlife Area

One area, three distinct habitats  
by Larry Archer

✧ Were one to go looking for a conservation area that is greater than the sum of its parts, the search might likely lead to west-central Missouri's J.N. "Turkey" Kearn Memorial Wildlife Area (WA).

Located on 1,674 acres in Johnson and Pettis counties, Kearn WA consists of three separate units that are home to distinctively different habitats, including woodlands, lakes, and grasslands, said MDC Wildlife Biologist Joe Coy.

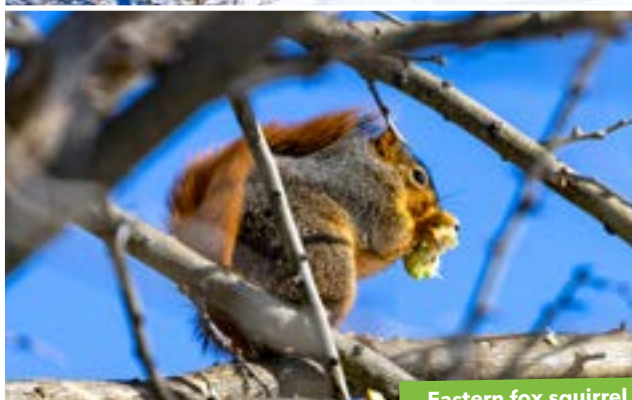
The area's northernmost and heavily forested unit draws deer and turkey hunters, while the area's second-largest unit — located just south of the largest — includes 25-acre and 9-acre lakes, making it a destination for anglers during warmer months and waterfowl hunters during the winter months.

It also can have something of interest for birders wanting to get a start on their big year.

"We are known to get the trumpeter swan," he said. "The big lake was the very first place that we ever saw swans in the area."

Located farther south and east, the third — and smallest — unit consists of grasslands undergoing habitat restoration for quail, making it ideal for other species as well, he said.

"All of our users that bird hunt, rabbit hunt, they love it."

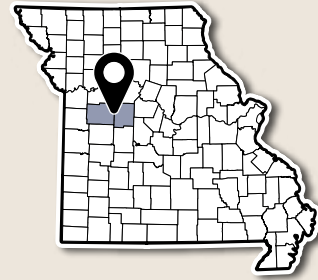


Eastern fox squirrel

"It's a unique area in the sense that it offers several aspects for people to come out and utilize."

—MDC Wildlife Biologist Joe Coy

DAVID STONNER



## J. N. TURKEY KEARN MEMORIAL WILDLIFE AREA

consists of 1674.1 acres in Johnson and Pettis counties. From Knob Noster, take Highway 23 south 7 miles, then County Road SE 600 east 2 miles, then turn south on SE 1201 to the area.

38.6628, -93.518

[short.mdc.mo.gov/4Kp](http://short.mdc.mo.gov/4Kp) 660-530-5500

### WHAT TO DO WHEN YOU VISIT



**Bicycling** Includes 4.5 miles of service roads open to bicycling.



**Birdwatching** The eBird list of birds recorded at J.N. Turkey Kearn Memorial WA is available at [short.mdc.mo.gov/4Kc](http://short.mdc.mo.gov/4Kc).



**Fishing** Black bass, catfish, and sunfish.



**Hunting** **Deer** and **turkey**  
Regulations are subject to annual changes. Refer to MDC's regulation page online at [short.mdc.mo.gov/Zjw](http://short.mdc.mo.gov/Zjw).

Also **bear, dove, quail, rabbit, and squirrel.**



**Trapping** Special use permit required.



Red-tailed hawk

### WHAT TO LOOK FOR WHEN YOU VISIT



Coyote



Red fox



Raccoon



Trumpeter swan

# Wild Guide



## Ring-Billed Gull

*Larus delawarensis*

### Status

Common transient

### Size

Length: 17½ inches; wingspan: 41½–48 inches

### Distribution

Statewide



**T**he ring-billed gull is the most frequently observed gull in Missouri. Adults have pale gray upper wings and wide black wing tips with small white spots. The bill is yellow with a black ring near the tip. Their distinct shape and white plumage make them easy to spot as they soar near our big rivers. They float on the water like ducks. Their call is a two-syllable *kyah keeya*.



### LIFE CYCLE

Ring-billed gulls start arriving in Missouri, considered their winter range, in October and reach their greatest numbers from December through February. They fly back north in March and April where they breed in colonies, mostly in the Great Lakes, the northern tier of the U.S., and northward into Canada. Young are covered in down and able to move about soon after hatching.



### FOODS

Known as opportunists and scavengers, gulls will eat most anything, including carrion and human food. They forage for mussels, fish, and worms on and near water. They sometimes forage in plowed fields for grubs and other small prey items, and in parking lots near water for fast-food refuse.



### HUMAN CONNECTIONS

Where gulls are common, people often view these quarreling, opportunistic feeders as loud, dirty, and disgusting. But when you live in the middle of the continent, like here in Missouri, the sight of a gull conjures images of exotic, carefree, coastal vacations. Many birdwatchers view gull identification as a challenge, almost as a kind of sport.

# Outdoor Calendar

❖ MISSOURI DEPARTMENT OF CONSERVATION ❖

## FISHING

### Black Bass

Impounded waters and non-Ozark streams:  
Open all year

Most streams south of the Missouri River:

- ▶ Catch-and-Keep:  
May 25, 2024–Feb. 28, 2025

### Nongame Fish Giggling

Streams and impounded waters,  
sunrise to midnight:  
Sept. 15, 2024–Feb. 15, 2025

### Paddlefish

Statewide:  
March 15–April 30, 2025

On the Mississippi River:  
March 15–May 15, 2025

### Trout Parks

*During the catch-and-release season,  
state trout parks (except Maramec Spring  
Park) are open only Friday–Monday.*

Catch-and-Release:  
Nov. 8, 2024–Feb. 10, 2025

## TRAPPING

### Badger, Gray Fox, Red Fox

Nov. 15, 2024–Jan. 31, 2025

### Beaver, Nutria

Nov. 15, 2024–March 31, 2025

### Bobcat, Coyote, Mink, Muskrat, Opossum, Raccoon, River Otter, Striped Skunk

Nov. 15, 2024–Feb. 28, 2025

### Rabbits

Nov. 15, 2024–Jan. 31, 2025



## Free MO Hunting and MO Fishing Apps

MO Hunting makes it easy to view permits, electronically notch them, and Telecheck your harvest. MO Fishing lets you view permits, find great places to fish, and ID your catch. Get both in Android or iPhone platforms at [short.mdc.mo.gov/Zi2](https://short.mdc.mo.gov/Zi2).

## HUNTING

### Badger, Gray Fox, Red Fox

Nov. 15, 2024–Jan. 31, 2025

### Bobcat, Opossum, Raccoon, Striped Skunk

Nov. 15, 2024–Feb. 28, 2025

### Coyote

*Restrictions apply during April, spring turkey  
season, and firearms deer season.*

Open all year

### Crows

Nov. 1, 2024–March 3, 2025

### Deer

Archery:  
Nov. 27, 2024–Jan. 15, 2025

Firearms:

- ▶ Alternative Methods Portion:  
Dec. 28, 2024–Jan. 7, 2025

### Pheasant

Nov. 1, 2024–Jan. 15, 2025

### Quail

Nov. 1, 2024–Jan. 15, 2025

### Rabbits

Oct. 1, 2024–Feb. 15, 2025

### Squirrels

May 25, 2024–Feb. 15, 2025

### Turkey

Fall Archery Portion:  
Nov. 27, 2024–Jan. 15, 2025

### Waterfowl

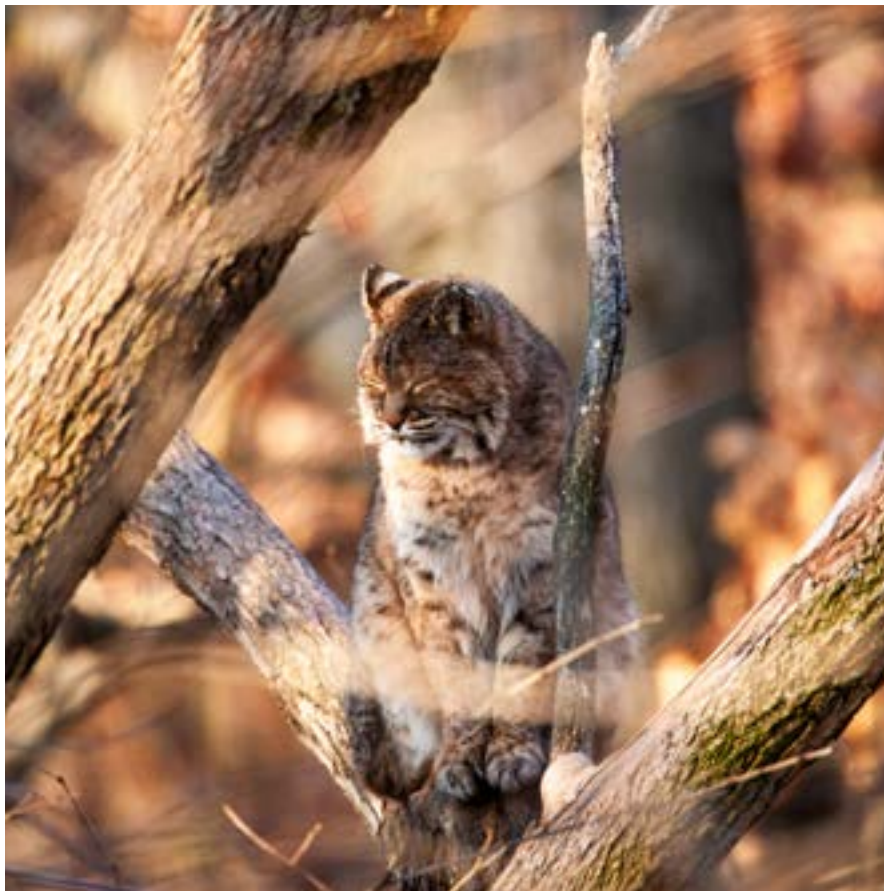
*See the Migratory Bird and Waterfowl  
Hunting Digest or visit [short.mdc.mo.gov/ZZf](https://short.mdc.mo.gov/ZZf)  
for more information.*



For complete information about seasons, limits, methods, and restrictions, consult the *Wildlife Code of Missouri* at [short.mdc.mo.gov/Zib](https://short.mdc.mo.gov/Zib). Current hunting, trapping, and fishing regulation booklets are available from local permit vendors or online at [short.mdc.mo.gov/ZZf](https://short.mdc.mo.gov/ZZf).



*Serving nature and you<sup>®</sup>*



**Follow us  
on Instagram**

@moconservation

This bobcat is experiencing the warmth of the winter sunshine. There are few things better on a cold, crisp day. The sun can revitalize you, lifting your mood and your spirit. So, bundle up and go soak up the sun and the outdoors. What will you discover?

📷 by **Noppadol Paothong**

**Free to Missouri households**

To subscribe, cancel your subscription, or update your address, visit [mdc.mo.gov/conmag](https://mdc.mo.gov/conmag).